



National Institute of Food and Agriculture
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Biomass Research and Development Initiative

Program Assessment and Future

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Overview

- What is BRDI?
- Assessment of USDA-supported projects
 - Program Objectives
 - Program Administration
- BRDI FY 2014/2015



Biomass Research and Development Initiative (2009-2012)

- \$118 M supporting 25 projects
 - Advanced Biofuels
 - Bioproducts
 - Biobased chemicals
- Technical Areas
 - Feedstock Development
 - Fuels/Product Development
 - Development Analysis (LCA)



Evolution of BRDI

- Total Program: \$188M Federal Investment
 - FY 2005: USDA \$12M (average \$1.1M)
 - FY 2012: USDA \$40M (average \$6.2M)
 - Leverages \$78M from private sources
- FY 2009 required all projects address LCA
- FY 2010 required integration of all three technical areas



Nuts and Bolts

- Broad eligibility
- Pre-application Review overseen by DOE
- Full Application Review overseen by USDA
- Awards made by each Department
 - No comingling of funds between Departments
 - No comingling of R&D and Demonstration



Program Objectives

- Development of:
 - Technologies and processes
 - High-value biobased products
 - Diversity of economically and environmentally sustainable sources of biomass



Committee on Science and Engineering for a Biobased Industry and Economy

- Multi-State Committee
- FY 2012 – 2013 review of 28 projects
 - Awards from FY 2005 – 2009
 - \$38.5M Investment
- Research Performance Progress Report Standard



Output Metrics Reviewed

- Defined in the 2008 Farm Bill
 - Business and Economic Development
 - Workforce Development
 - Outreach
 - Productive RD&D
 - Quality RD&D



Program Outputs (28 projects)

- New Patents: 21
- Genetic Products Developed: 15
- Equipment/Processes: 11
- Materials/Chemicals: 14
- Evaluation Tools/Models: 9



Outputs continued

- Peer Reviewed Publications: 257
- Students Educated: 193 (14 new courses)
- Learners Reached: 17,665 (289 events)
- Workforce Trained: 125
- Jobs Created: 100
- Post-BRDI Funds Leveraged: \$128M



“Develop technologies and processes”

- “Improving Biorefinery Economics through Microchannel Hydroprocessing”
 - Velocys (FY 09) \$2.65M



“Develop high-value biobased products”

- “Thermoplastic Composites Reinforced with Natural Fibers”
 - Louisiana State University (FY 06) \$800K
- “High-Value Chemical Production”
 - Virent Energy Systems (FY 06) \$2M



“Diversity of sustainable biomass”

- “Overcoming Barriers to Facilitate Willow”
 - State University of New York (FY 05) \$800K
- “A Demonstration of a Community-Scale Biomass Energy System”
 - University of Minnesota-Morris (FY 05) \$1.9M



Program Administration

- Technical Area Distribution
- Cost-sharing
- Consortium-based, multi-disciplinary awards
- Geographic Diversity

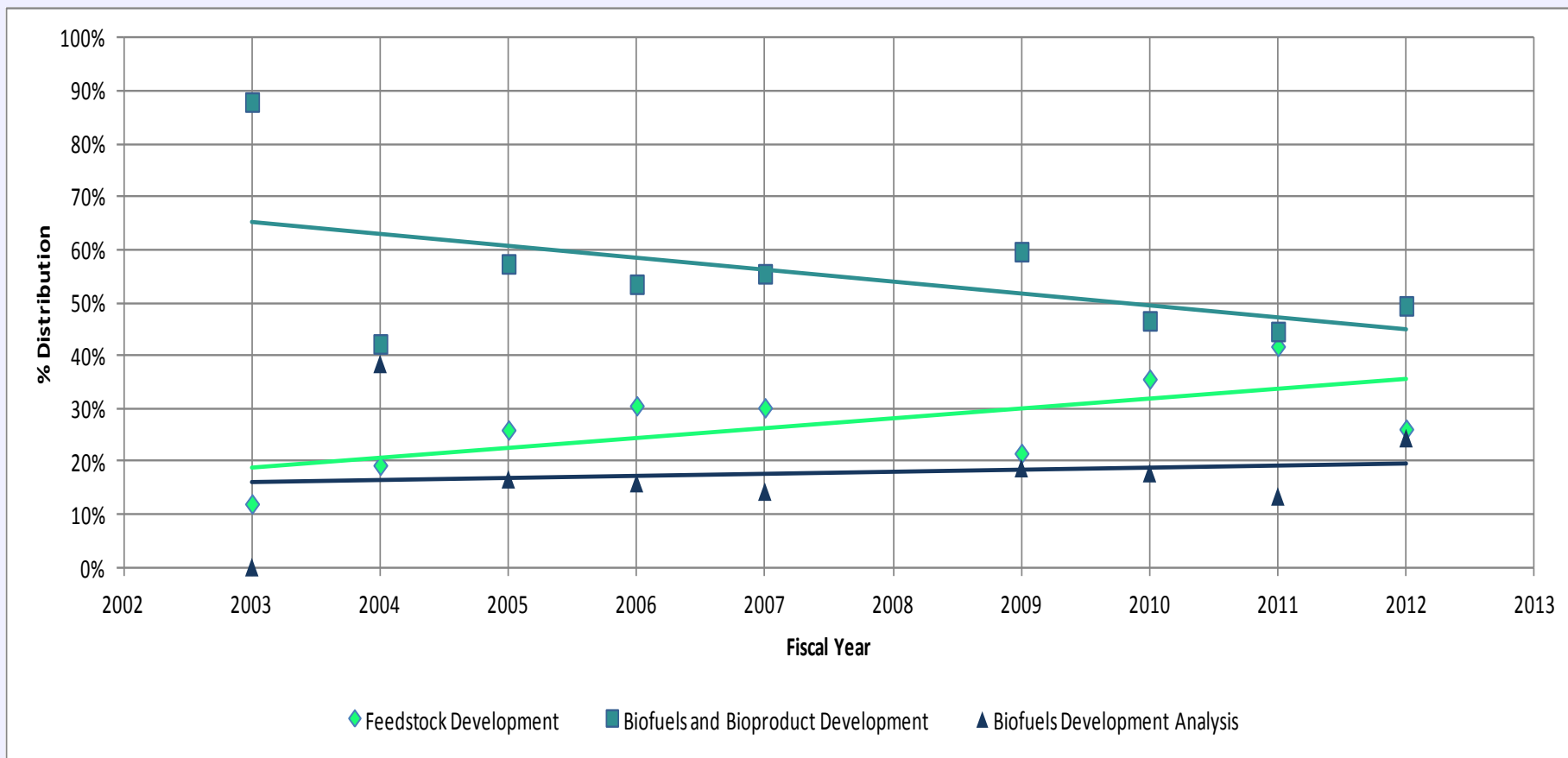


Technical Area Distribution (FY 2003-2012)

Technical Area	Distribution	% Distribution
Feedstock Development	\$55,180,006	29%
Biofuels and Bioproduct Development	\$99,918,168	53%
Development Analysis	\$33,504,689	18%



Technical Area Distribution Trends





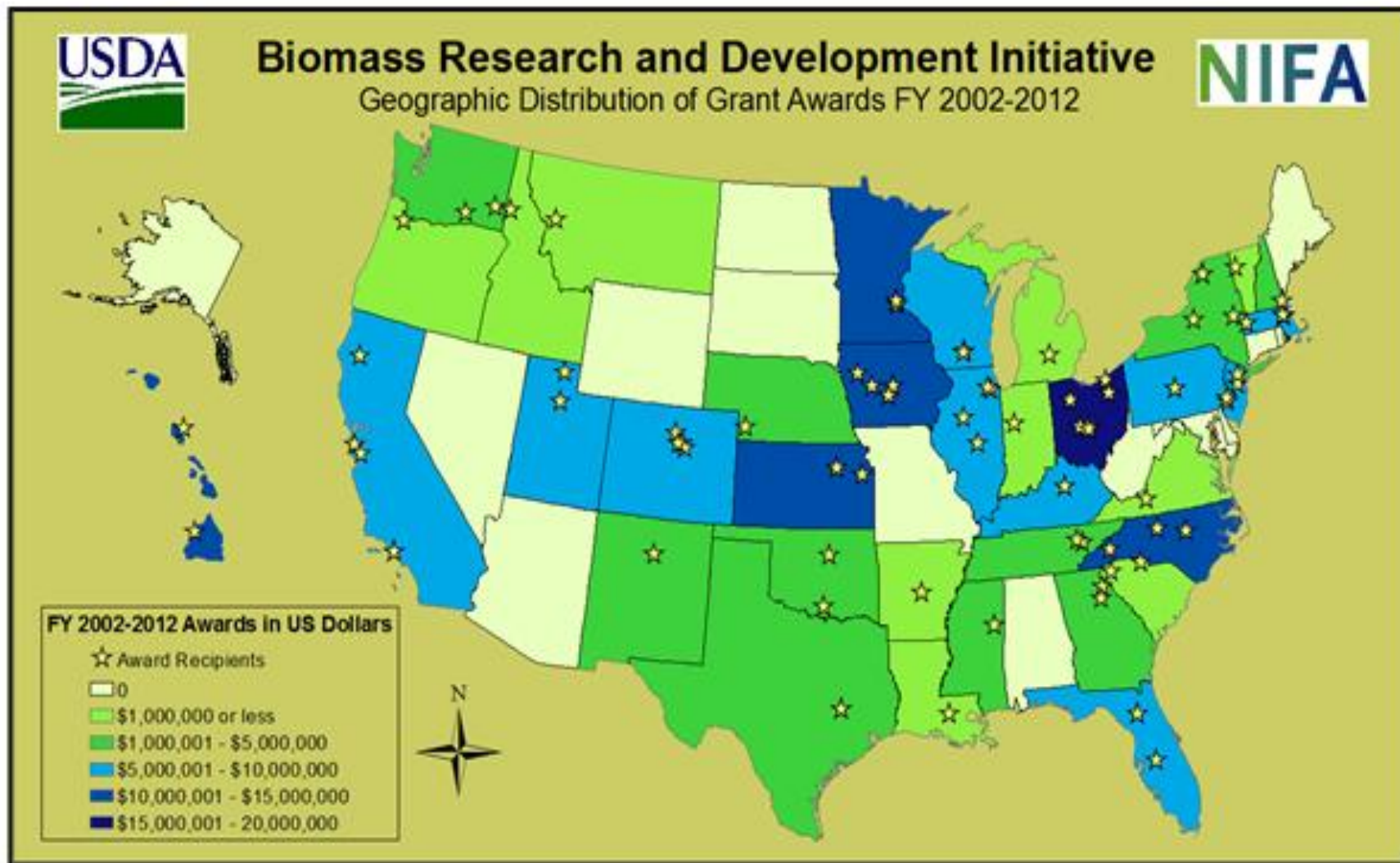
Cost-Sharing

- R&D: 20%
- Demonstration: 50%
- Life of the program (2002): \$267M+



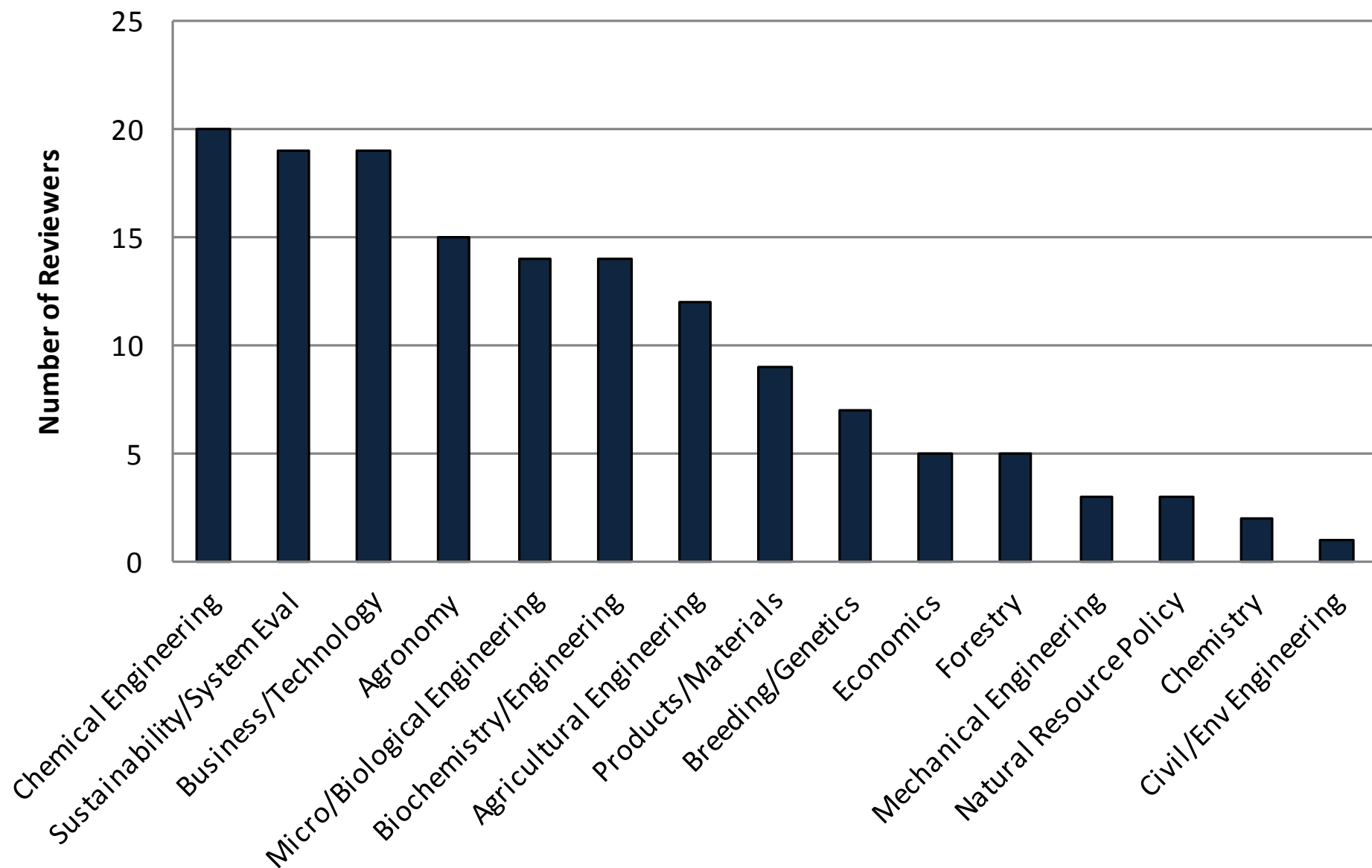
Project Lead and Collaborator Type (2002-2012)

	Project Lead Type	Collaborator Type
NGO	8%	17%
Academia	43%	38%
Small Business	26%	37%
Industry	10%	14%
Federal	12%	16%
State	1%	3%



BRDI Panelist Expertise

FY 2010-2012





BRDI Reviewers (FY 2010-2012)

Affiliation	% of Reviewers
Industry/Small Business	32%
Federal	14%
Academia	53%
State	1%
NGO	0%



Success Rate by Applicant Type (FY 2010-2012)

	Applications	Awards	% of Awards	Pre-Success	Full Success
Small Business	370 / 62	4	25%	1%	6%
Industry	30 / 8	2	13%	7%	25%
Federal	17 / 5	3	19%	18%	60%
NGO	31 / 4	0	0%	0%	0%
Academia	337 / 68	7	44%	2%	10%
State	8 / 1	0	0%	0%	0%
Total	793 / 148	16			



2014 Farm Bill and BRDI

- Mandatory Funding FY 2014-2017 @ \$3M
- Anticipate Request for Concept Papers
 - Late November/Early December
- DoE will lead pre-application review
 - All applications come through USDA
- USDA will conduct Merit Review